

IN THE SPECIFICATION

Please amend the specification as follows:

Please replace the paragraph beginning on page 11, line 19 and ending on page 12, line 12 with the following:

In the step 708, the position of the target is determined within the initial image. Specifically, a two-dimensional cross-correlation algorithm is used to determine where the kernel is within the initial image. This is accomplished by comparing the selected kernel to the initial image to determine the position of the kernel within the image. From this information, the x,y coordinates within the initial image of the kernel and, therefore, the target can be determined. More specifically, the two-dimensional cross-correlation algorithm consists of comparing the selected kernel, which is stored as a TIFF, raw, or any other format image file in the computer processor, to the initial image. This comparison is generally done by comparing the intensity of the set of pixels comprising the kernel to the intensity of a similar set of pixels within the image. More specifically, a set of intensity values may be assigned to each pixel within the kernel and the image and a comparison performed until a match is made, thereby identifying the location of the kernel within the image. In a preferred embodiment, a gray scale or gray value is used for the intensity. For example, this comparison is accomplished by assigning a gray value from 0-255 to each pixel within the kernel and to each pixel of a digital form of the image, where 0 corresponds to black and 255 corresponds to white. The set of gray values assigned to the kernel are then compared to equivalent sets of gray values from the image until the kernel is located within the image. Of course, this comparison may not be perfect, so a correlation coefficient is given that ranges from 0-1 and is reflective of the degree of matching found between the set of gray values representing the kernel and those from the image. The center pixel within the kernel is then used to provide the x,y coordinates of the kernel within the image. These coordinates serve as the initial position of the target and the portion of the transmission line to be monitored. It should be appreciated that where the user selected the kernel from the initial image itself that the x,y coordinates of the kernel may be obtained in the same manner but without having to locate the kernel using the two-dimensional cross-correlation algorithm. It should be

· appreciated that other template matching techniques, such as least squares, may be used to locate the target within the image. Also, these same techniques may be used with color images, and images could be stored in raw, compressed, or other commonly used image formats.